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United Nations

Report of the Committee on the Peaceful Uses of Outer Space

Fifty-third session (9-18 June 2010)

General Assembly

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[8 July 2010]

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Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its fifty-third session in Vienna from 9 to 18 June 2010. The officers of the Committee were as follows:

Chair:	Dumitru-Dorin Prunariu (Romania)
First Vice-Chair:	Nomfuneko Majaja (South Africa)
Second Vice-Chair/Rapporteur:	Raimundo González Aninat (Chile)

The unedited verbatim transcripts of the meetings of the Committee are contained in documents COPUOS/T.613-627.

A. Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-seventh session in Vienna from 8 to 19 February 2010, under the chairmanship of Ulrich Huth (Germany). The report of the Subcommittee was before the Committee (A/AC.105/958).

3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space had held its forty-ninth session in Vienna from 22 March to 1 April 2010, under the chairmanship of Ahmad Talebzadeh (Islamic Republic of Iran). The report of the Subcommittee was before the Committee (A/AC.105/942). The unedited verbatim transcripts of the meetings of the Subcommittee are contained in documents COPUOS/Legal/T.803-819.

B. Adoption of the agenda

4. At its opening meeting, the Committee adopted the following agenda:

1. Opening of the session.
2. Adoption of the agenda.
3. Election of officers.
4. Statement by the Chair.
5. General exchange of views.
6. Ways and means of maintaining outer space for peaceful purposes.
7. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
8. Report of the Scientific and Technical Subcommittee on its forty-seventh session.
9. Report of the Legal Subcommittee on its forty-ninth session.

10. Spin-off benefits of space technology: review of current status.

11. Space and society.

12. Space and water.

13. Space and climate change.

14. Use of space technology in the United Nations system.

15. International cooperation in promoting the use of space-derived geospatial data for sustainable development.

16. Other matters.

17. Report of the Committee to the General Assembly.

C. Election of officers

5. At the 613th meeting, on 9 June, Dumitru-Dorin Prunariu (Romania) was elected Chair of the Committee, Nomfuneko Majaja (South Africa) was elected First Vice-Chair and Raimundo González Aninat (Chile) was elected Second Vice-Chair/Rapporteur, each for a two-year term of office.

6. Also at the 613th meeting, the Committee endorsed the election of Ulrich Huth (Germany) as Chair of the Scientific and Technical Subcommittee at its forty-seventh session and Ahmad Talebzadeh (Islamic Republic of Iran) as Chair of the Legal Subcommittee for a two-year term of office, starting with the forty-ninth session.

D. Membership

7. In accordance with General Assembly resolutions 1472 A (XIV), 1721 E (XVI), 3182 (XXVIII), 32/196 B, 35/16, 49/33, 56/51, 57/116, 59/116 and 62/217 and decision 45/315, the Committee on the Peaceful Uses of Outer Space was composed of the following 69 States: Albania, Algeria, Argentina, Australia, Austria, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Lebanon, Libyan Arab Jamahiriya, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nicaragua, Niger, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

E. Attendance

8. Representatives of the following States members of the Committee attended the session: Algeria, Argentina, Australia, Austria, Belgium, Bolivia

(Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cuba, Czech Republic, Ecuador, Egypt, France, Germany, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Kenya, Libyan Arab Jamahiriya, Malaysia, Mexico, Mongolia, Morocco, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom, United States, Venezuela (Bolivarian Republic of) and Viet Nam.

9. At its 613th meeting, the Committee decided to invite, at their request, Azerbaijan, Costa Rica, Côte d'Ivoire, the Dominican Republic, Panama, Tunisia, the United Arab Emirates and Zimbabwe, as well as the Holy See, to send observers to attend its fifty-third session and to address it, as appropriate, on the understanding that doing so would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

10. Observers for the International Atomic Energy Agency, the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) attended the session.

11. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: the African Organization of Cartography and Remote Sensing, the Asia-Pacific Space Cooperation Organization (APSCO), the European Organisation for Astronomical Research in the Southern Hemisphere, the European Space Agency (ESA), the European Telecommunications Satellite Organization and the Regional Centre for Remote Sensing of North African States (CRTEAN).

12. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: the Association of Space Explorers (ASE), EURISY, the European Space Policy Institute (ESPI), the International Institute for Applied Systems Analysis, the International Society for Photogrammetry and Remote Sensing, the International Space University, the International Academy of Astronautics (IAA), the International Astronautical Federation (IAF), the International Astronomical Union, the International Institute of Space Law (IISL), the Prince Sultan bin Abdulaziz International Prize for Water, the Secure World Foundation (SWF) and the Space Generation Advisory Council (SGAC).

13. At its 613th meeting, the Committee decided to invite, at their request, the International Association for the Advancement of Space Safety (IAASS) and the Association of Remote Sensing Centres in the Arab World to send observers to attend its fifty-third session and to address it, as appropriate, on the understanding that doing so would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

14. A list of representatives of States members of the Committee, States not members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2010/INF/1.

F. General statements

15. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Austria, Belgium, Bolivia (Plurinational State of), Brazil, Burkina Faso, Canada, Chile, China, Colombia, Ecuador, France, Germany, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kazakhstan, Libyan Arab Jamahiriya, Malaysia, Mexico, Nigeria, Pakistan, Poland, Republic of Korea, Romania, Russian Federation, Saudi Arabia, South Africa, Sudan, Switzerland, Syrian Arab Republic, Thailand, Turkey, Ukraine, United Kingdom, United States and Venezuela (Bolivarian Republic of). The representative of Algeria made a statement on behalf of the Group of 77 and China. The representative of Zimbabwe made a statement on behalf of the Group of African States. The representative of Costa Rica made a statement on behalf of the Group of Latin American and Caribbean States. The representative of Spain made a statement on behalf of the European Union. The representative of Egypt made a statement on behalf of the Movement of Non-Aligned Countries. The observers for Tunisia and the United Arab Emirates also made statements. Statements were also made by the observers for APSCO, CRTEAN, ESPI, IAF, SGAC and SWF.

16. The Committee welcomed the election of Dumitru-Dorin Prunariu (Romania) as its Chair, Nomfuneko Majaja (South Africa) as its First Vice-Chair and Raimundo González Aninat (Chile) as its Second Vice-Chair/Rapporteur.

17. The Committee expressed its appreciation to Ciro Arévalo Yepes (Colombia), the outgoing Chair, to Suvit Vibulsresth (Thailand), the outgoing First Vice-Chair, and to Filipe Duarte Santos (Portugal), the outgoing Second Vice-Chair/Rapporteur, for their excellent work and achievements during their terms of office.

18. The outgoing Chair of the Committee made a statement, noting achievements made by the Committee in the previous period, and acknowledged that the Committee had made concrete efforts to promote regional and interregional cooperation and coordination in space activities for the benefit of all countries.

19. At the 613th meeting, on 9 June, the Chair delivered a statement highlighting the role played by the Committee in promoting efforts to further space exploration and bring the benefits of space technology to Earth to ensure sustainable development for all countries. He stressed the fundamental importance of addressing the major challenges to global development by means of developing space science and technology applications.

20. At the 615th meeting, the Director of the Office for Outer Space Affairs of the Secretariat briefed the Committee on the work carried out by the Office during the past year and stressed the importance of the availability of financial and other resources for the successful implementation of the Office's programme of work.

21. The Committee congratulated Japan on the successful return of its unmanned Hayabusa space mission from the near-Earth asteroid Itokawa. It was noted that the Hayabusa round-trip mission marked the first time that a spacecraft had made physical contact with an asteroid before returning to Earth. The hope was expressed that the Hayabusa capsule would contain a sample from the surface of the asteroid.

22. The Committee also congratulated the Russian Federation on the successful launch from the Baikonur cosmodrome of the manned spacecraft Soyuz TMA-19. It

was the twenty-fourth mission of international crew to the International Space Station and the hundredth launch under the ISS programme.

23. The Committee noted with appreciation the establishment of a national space agency by the Government of the Plurinational State of Bolivia.

24. The Committee also noted the establishment of the UK Space Agency by the United Kingdom to replace the British National Space Centre.

25. The Committee heard the following presentations:

(a) "Satellite activities of Tunisia relating to telecommunication networks", by the representative of Tunisia;

(b) "Space activities of the National Cartography and Remote Sensing Centre", by the representative of Tunisia;

(c) "Recent developments in the field of space in Turkey, and the UN/Turkey/ESA Workshop on Space Technology Applications for Socio-Economic Benefits", by the representative of Turkey;

(d) "Global Lunar Conference", by the representative of China.

26. The Committee noted with appreciation the successful completion of the 60th International Astronautical Congress, held in the Republic of Korea in October 2009 and attended by over 4,000 participants from 72 countries. The Committee noted with satisfaction that the International Astronautical Congress would be hosted by the Government of the Czech Republic in 2010 and by the Government of South Africa in 2011.

G. Adoption of the report of the Committee

27. After considering the various items before it, the Committee, at its 627th meeting, on 18 June, adopted its report to the General Assembly containing the recommendations and decisions set out below.

Chapter II

Recommendations and decisions

A. Ways and means of maintaining outer space for peaceful purposes

28. In accordance with paragraph 42 of General Assembly resolution 64/86, the Committee continued its consideration, as a matter of priority, of ways and means of maintaining outer space for peaceful purposes.

29. The representatives of the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements were also made on the item by representatives of other member States. The observer for Costa Rica made a statement on behalf of the Group of Latin American and Caribbean States and the representative of Spain made a statement on behalf of the European Union.

30. The Committee heard the following presentations:

(a) "Space Security Index 2010", by the representative of Canada;

(b) "The Shared Space Situational Awareness Program of the United States", by the representative of the United States.

31. The Committee agreed that, through its work in the scientific, technical and legal fields, it had a fundamental role to play in ensuring that outer space was maintained for peaceful purposes.

32. The Committee noted with satisfaction the agreement of the General Assembly that, during its consideration of the matter, the Committee could continue to consider ways to promote regional and interregional cooperation based on experiences stemming from the Space Conferences of the Americas and the African Leadership Conferences on Space Science and Technology for Sustainable Development, and the role that space technology could play in the implementation of the recommendations of the World Summit on Sustainable Development.[1]

33. The Committee noted with appreciation that representatives of Colombia, Ecuador and Mexico, as well as of the pro tempore secretariat of the Fifth Space Conference of the Americas, the functions of which were exercised by the Government of Ecuador, and the International Group of Experts, had met in Quito on 16 and 17 December 2009 and in Cuenca, Ecuador, on 27 and 28 May 2010. The Committee also noted that the meetings had resulted in detailed plans for the preparations for the Sixth Space Conference of the Americas, to be hosted by the Government of Mexico in November 2010. The Committee noted that a seminar on promoting regional cooperation in matters relating to space law and policy had been held in conjunction with the meeting in May 2010. The Committee noted with appreciation that a preparatory conference for the Sixth Space Conference of the Americas would be hosted by the Government of Chile in July 2010.

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[1] *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum).

34. The Committee noted with satisfaction that the Third African Leadership Conference on Space Science and Technology for Sustainable Development had been held in Algiers from 30 November to 2 December 2009, under the patronage of the President of Algeria. In that regard, the Committee noted that, on the occasion of the Conference, Algeria, Kenya, Nigeria and South Africa had signed a cooperation agreement on the African Resource Management satellite constellation. The Committee also noted with appreciation that the Government of Kenya would act as host to the Fourth African Leadership Conference in 2011.

35. The Committee also noted with satisfaction that APSCO had held its second Council Meeting in Beijing on 17 and 18 December 2009 and had commenced the implementation of the long-term development plan and five-year project plan. An APSCO symposium on space technology and applications would be held in Pakistan in September 2010, on the subject of agriculture and food security.

36. The Committee noted with appreciation the holding of the sixteenth session of the Asia-Pacific Regional Space Agency Forum (APRSAF) in Bangkok from 26 to 29 January 2010, with the theme "Space applications: contributions towards human safety and security". The seventeenth session of APRSAF, to be jointly organized by the Government of Australia and the Government of Japan, would be hosted by Australia in November 2010.

37. The Committee emphasized that regional and interregional cooperation and coordination in the field of space activities were essential to strengthen the peaceful uses of outer space, to assist States in the development of their space capabilities and to contribute to the achievement of the Millennium Development Goals.[2]

38. The Committee noted the project of the European Union to adopt a code of conduct for outer space activities. The draft text had been supported by the Council of the European Union in December 2008 as a basis for consultations with third parties. The draft code of conduct included transparency and confidence-building measures and reflects a comprehensive approach to safety and security in outer space guided by the following principles: freedom of access to space for all for peaceful purposes, preservation of the security and integrity of space objects in orbit and due consideration for the legitimate security and defence interests of States. The Committee also noted that consultations with other States were under way, with a view to reaching consensus on a text that would be acceptable to the greatest possible number of States.

39. Some delegations reiterated their commitment to the peaceful use and exploration of outer space and emphasized the following principles: equal and non-discriminatory access to outer space and equal conditions for all States, irrespective of their level of scientific, technical and economic development; non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, occupation or any other means; non-militarization of outer space and its strict exploitation for the improvement of living conditions and peace on the planet; and regional cooperation to promote space activities as established by the General Assembly and other international forums.

40. Some delegations were of the view that the Committee provided a unique opportunity for fostering international and interregional dialogue and cooperation to

[2] A/56/326, annex.

maintain peaceful uses of outer space, and that it served as a valuable forum for encouraging research and information-sharing, exchanging good practices and defining confidence-building measures in the framework of international space law.

41. Some delegations were of the view that all activities in outer space should bring benefits to humankind and that all countries, irrespective of size and capacity, should have the right to use outer space for peaceful purposes.

42. The view was expressed that the Committee played a notable role in advancing space cooperation and provided a unique forum for the exchange of information among States and that there were tangible opportunities to enhance international cooperation, in keeping with the Committee's mandate.

43. Some delegations were of the view that the existing legal regime of outer space was not adequate to prevent the weaponization of outer space and address the issues of the space environment and that the further development of international space law would be important for maintaining outer space for peaceful purposes. Those delegations also expressed their support for a comprehensive legal instrument to maintain outer space for peaceful purposes, without prejudice to the existing legal framework.

44. Some delegations were of the view that provisions of international space law had to be improved to effectively respond to challenges posed by a number of problems involved in space activities, such as the absence of the definition and delimitation of outer space, the use of nuclear power sources in outer space and the threat of space debris. The delegations that expressed that view considered that the improvement of international space law would ensure that outer space was used exclusively for peaceful purposes and that it was necessary to enhance coordination within the United Nations system to promote the creation of international rules and mechanisms that would address effectively the current challenges to outer space activities.

45. The view was expressed that the conclusion of the draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects, which had been presented by China and the Russian Federation to the Conference on Disarmament in 2008, would prevent an arms race in outer space.

46. The view was expressed that, in order to maintain the peaceful nature of space activities and prevent the weaponization of outer space, it was essential for the Committee to enhance its cooperation and coordination with other bodies and mechanisms of the United Nations system, such as the First Committee of the General Assembly and the Conference on Disarmament.

47. The view was expressed that the Committee had been created exclusively to promote international cooperation on the peaceful uses of outer space and that disarmament issues were more appropriately dealt with in other forums, such as the First Committee of the General Assembly and the Conference on Disarmament.

48. The view was expressed that the principle embodied in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies,[3] ensured the free exploration

[3] United Nations, *Treaty Series*, vol. 610, No. 8843.

and use of outer space by all States, including the right to uninterrupted operation of the global telecommunication network.

49. The view was expressed that, in order to ensure that developing countries enjoy the benefits of space science and technology, developed countries should share experiences and know-how, as well as provide affordable and timely access to data on a non-discriminatory basis.

50. The view was expressed that activities in outer space, including those related to satellite products, which were making a substantial contribution to the well-being and socio-economic development of humankind, should be carried out in a manner compatible with the sovereign rights of States, including the principle of non-intervention, as enshrined in the relevant United Nations instruments.

51. The Committee recommended that at its fifty-fourth session, in 2011, consideration, on a priority basis, of the item on ways and means of maintaining outer space for peaceful purposes should be continued.

B. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space

52. The Committee considered the agenda item "Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)" in accordance with General Assembly resolution 64/86.

53. The representatives of Canada, Japan, Nigeria, Portugal and the Russian Federation made statements under the item. Representatives of other member States also made statements relating to the item during the general exchange of views and the discussion on the report of the Scientific and Technical Subcommittee on its forty-seventh session.

54. The Committee heard a presentation entitled "Space initiatives at the Center for Strategic and International Studies", by the representative of the United States.

55. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee, submitted to the Subcommittee at its forty-seventh session by its Working Group of the Whole, which had been reconvened under the chairmanship of S. K. Shivakumar (India) to consider, inter alia, the implementation of the recommendations of UNISPACE III (A/AC.105/958, para. 55 and annex I, sect. III).

56. The Committee noted with satisfaction that Member States continued to contribute to the implementation of the recommendations of UNISPACE III through national and regional activities and by supporting and participating in the programmes established in response to those recommendations, and that some States had established policies aimed at maximizing and harmonizing the use of various types of space-based services, such as navigation, meteorology and remote sensing, to respond to societal needs.

57. The Committee noted with appreciation that the Action Team on Public Health, co-chaired by Canada and India, had included in its workplan the use of telecommunications in the context of tele-health and Earth observation applications

in the context of tele-epidemiology, with an emphasis on improving public health and infectious-disease management. The Committee noted that the action team was pursuing the objectives contained in its workplan for the period 2010-2011 and would present a report at the forty-eighth session of the Subcommittee. The Committee also noted that the action team encouraged Member States to contribute to its report by sharing experiences and views on the way forward.

58. The view was expressed that the Committee should give consideration to the possibility of holding a fourth United Nations conference on the exploration and peaceful uses of outer space to address the current major challenges of sustainable development.

59. The Committee had before it the report on the contribution of the Committee on the Peaceful Uses of Outer Space to the work of the Commission on Sustainable Development for the thematic cluster 2010-2011 (A/AC.105/944).

60. The Committee agreed that, in the preparation of its forthcoming contribution to the work of the Commission on Sustainable Development, it should contribute to the thematic clusters in which space technology and its applications played a particularly important role; pay attention to the cross-cutting issues identified by the Commission; identify areas where space-based systems could complement terrestrial systems to promote integrated solutions; and include, as appropriate and in addition to examples of regional and international cooperation, national success stories that might provide useful examples for the overall contribution of the Committee.

61. The Committee requested the Secretariat to provide, for consideration by the Working Group of the Whole at the forty-eighth session of the Scientific and Technical Subcommittee, a draft of the contribution of the Committee to the work of the Commission for the next thematic cluster, bearing in mind the overall review of the implementation of Agenda 21,[4] together with contributions of member States.

62. The Committee agreed that the Director of the Office for Outer Space Affairs should attend the sessions of the Commission with a view to raising awareness and promoting the benefits of space science and technology, in particular in the areas being addressed by the Commission.

63. Some delegations were of the view that the Committee, in its contributions to the work of the Commission on Sustainable Development, should focus on the following interrelated main areas: poverty and development; sustainability of energy systems; food security, water resources and biodiversity; and climate change.

64. The Committee noted with appreciation the publication of the report on the events of World Space Week 2009 (ST/SPACE/48), prepared by the World Space Week Association in cooperation with the Office for Outer Space Affairs.

[4] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

C. Report of the Scientific and Technical Subcommittee on its forty-seventh session

65. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958), which contained the results of its deliberations on the agenda items considered by the Subcommittee in accordance with General Assembly resolution 64/86.

66. The Committee expressed its appreciation to the Chair of the Subcommittee, Ulrich Huth (Germany) for his able leadership during its forty-seventh session.

67. The representatives of Belgium, Canada, China, Colombia, Cuba, Germany, India, Indonesia, Japan, Mexico, Nigeria, the Russian Federation, Saudi Arabia, South Africa, the Sudan, Thailand, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to this item were also made by representatives of other member States and by the observer for Costa Rica on behalf of the Group of Latin American and Caribbean States.

68. The Committee heard the following presentations:

(a) "Japanese contribution for disaster management support", by the representative of Japan;

(b) "An introduction to the Space Foundation", by the representative of the United States;

(c) "Use of space-based information for seismic risk management: an Italian Space Agency pilot project", by the representative of Italy;

(d) "NASA today and tomorrow", by the representative of the United States;

(e) "Re-entry of Hayabusa on 13 June 2010", by the representative of Japan;

(f) "Gamma-ray astronomy on the way to uncovering the mystery of dark matter in the universe", by the representative of the Russian Federation;

(g) "Proposing a new radio-quiet zone on the far side of the Moon", by the observer for IAA;

(h) "Space in Chile: past, present, future", by the representative of Chile;

(i) "Volcanic ash layers over Europe: airborne observations with the DLR Falcon research aircraft in April/May 2010", by the representative of Germany.

1. United Nations Programme on Space Applications

(a) Activities of the United Nations Programme on Space Applications

69. The Committee took note of the discussion of the Subcommittee under the item on the United Nations Programme on Space Applications, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 22-46 and annex I, paras. 2-3).

70. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which had been convened under the chairmanship of S. K. Shivakumar (India) to consider this item (A/AC.105/958, paras. 25 and 35).

71. The Committee took note of the activities of the Programme carried out in 2009, as presented in the report of the Scientific and Technical Subcommittee (A/AC.105/958, paras. 32-34) and in the report of the Expert on Space Applications (A/AC.105/969, annex I).

72. The Committee expressed its appreciation to the Office for Outer Space Affairs for the manner in which the activities of the Programme had been implemented. The Committee also expressed its appreciation to the Governments and intergovernmental and non-governmental organizations that had sponsored those activities.

73. The Committee noted with satisfaction that further progress was being made in the implementation of the activities of the Programme for 2010, as described in the report of the Subcommittee (A/AC.105/958, para. 35).

74. The Committee noted with satisfaction that the Office for Outer Space Affairs was helping developing countries and countries with economies in transition to participate in and benefit from activities being carried out by the Programme.

75. The Committee noted with concern the limited financial resources available to implement the Programme and appealed to States and organizations to continue supporting the Programme through voluntary contributions.

76. The Committee noted with appreciation the implementation of the Programme's Basic Space Science Initiative and Basic Space Technology Initiative, as well as its preparation of the Human Space Technology Initiative, aimed at enhancing the participation of developing countries in scientific activities at the International Space Station.

(i) Conferences, training courses and workshops of the United Nations Programme on Space Applications

77. The Committee endorsed the workshops, training courses, symposiums and expert meetings planned for the remaining part of 2010, and expressed its appreciation to Austria, Bolivia (Plurinational State of), the Czech Republic, Egypt, the Republic of Moldova, Thailand, Turkey and the United States, as well as to ESA and IAF, for co-sponsoring, hosting and supporting those activities (A/AC.105/969, annex II).

78. The Committee noted with appreciation that the first expert meeting on the Human Space Technology Initiative would be held in Putrajaya, Malaysia, in the fourth quarter of 2010 and expressed its appreciation to the Government of Malaysia, the National Space Agency of Malaysia (ANGKASA) and the National University of Malaysia for acting as host to and supporting that meeting.

79. The Committee endorsed the programme of workshops, training courses, symposiums and expert meetings related to socio-economic benefits of space activities, small satellites, basic space technology, human space technology, space weather, global navigation satellite systems (GNSS) and search and rescue, planned to be held in 2011 for the benefit of developing countries.

80. The Committee noted with appreciation that the host countries of the regional centres for space science and technology education, affiliated to the United Nations, were providing the centres with significant financial and in-kind support.

(ii) Long-term fellowships for in-depth training

81. The Committee expressed its appreciation to the Politecnico di Torino, the Istituto Superiore Mario Boella and the Istituto Elettrotecnico Nazionale Galileo Ferraris for the fellowships they provided for postgraduate studies relating to GNSS and landscape epidemiology.

82. The Committee noted that it was important to increase opportunities for in-depth education in all areas of space science, technology and applications and space law through long-term fellowships and urged Member States to make such opportunities available at their relevant institutions.

(iii) Technical advisory services

83. The Committee noted with appreciation the technical advisory services provided under the United Nations Programme on Space Applications in support of activities and projects promoting regional cooperation in space applications, as referred to in the report of the Expert on Space Applications (A/AC.105/969, paras. 46-51).

(b) International Space Information Service

84. The Committee noted with satisfaction that the publication entitled *Highlights in Space 2009* had been issued on CD-ROM.

85. The Committee noted with satisfaction that the forthcoming publication on the United Nations Programme on Space Applications would provide information on the orientation and activities of the Programme for the period 2010 and beyond.

86. The Committee noted with satisfaction that the Secretariat had continued to enhance the International Space Information Service and the website of the Office for Outer Space Affairs (www.unoosa.org).

(c) Regional and interregional cooperation

87. The Committee noted with satisfaction that the United Nations Programme on Space Applications continued to emphasize cooperation with Member States at the regional and global levels to support the regional centres for space science and technology education, affiliated to the United Nations. The highlights of the activities of the regional centres supported under the Programme in 2009 and the activities planned for 2010 and 2011 were presented in the report of the Expert on Space Applications (A/AC.105/969, annexes I-III).

(d) International Satellite System for Search and Rescue

88. The Committee recalled that, at its forty-fourth session, it had agreed that a report on the activities of the International Satellite System for Search and Rescue (COSPAS-SARSAT) should be considered annually by the Committee as part of its consideration of the United Nations Programme on Space Applications and that member States should report on their activities relating to COSPAS-SARSAT.

89. The Committee noted with satisfaction that COSPAS-SARSAT currently had 40 member States and two participating organizations and that it had six polar-orbiting and five geostationary satellites that provided worldwide coverage for

emergency beacons. The Committee further noted that since 1982, COSPAS-SARSAT had helped to save thousands of lives every year; in 2009, it helped to save 1,596 lives in 478 search and rescue events worldwide.

90. The Committee further noted that the use of satellites in medium-Earth orbit continued to be explored, with a view to improving international satellite-aided search and rescue operations.

91. The Committee welcomed the continued efforts to enhance the System for Search and Rescue, including testing of Global Positioning System satellites, and improving the capabilities of beacons in the future to best take advantage of medium-Earth orbit satellites.

2. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment

92. The Committee took note of the discussion of the Subcommittee under this agenda item, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 58-66).

93. In the course of the discussion, delegations reviewed national and cooperative programmes on remote sensing, providing examples of national programmes and bilateral, regional and international cooperation.

94. The Committee noted with satisfaction that a growing number of developing countries were actively developing and deploying their own remote-sensing satellite systems and utilizing space-based data to advance socio-economic development, and stressed the need to continue enhancing capacities of developing countries in the use of remote-sensing technology.

95. The Committee noted with satisfaction the increasing availability of remote-sensing data and derived information at little or no cost, and underlined the importance of ensuring non-discriminatory access to space-based data at a reasonable cost or free of charge, and in a timely manner.

96. The Committee recognized the important role played by international intergovernmental organizations in promoting international cooperation in the use of remote-sensing technology, in particular for the benefit of developing countries.

97. Some delegations were of the view that the unrestricted and unregulated availability of high-resolution satellite data in the public domain could be detrimental to the safety of people and States. Those delegations proposed that the Committee and its Legal Subcommittee place this item on their agendas for their next sessions in order to establish guidelines for the regulation of the sale, distribution and dissemination of high-resolution satellite data on the Internet.

3. Space debris

98. The Committee took note of the discussion of the Subcommittee under the agenda item on space debris, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 67-89).

99. The Committee endorsed the decisions and recommendations of the Subcommittee on this item (A/AC.105/958, paras. 80 and 81).

100. The Committee noted with satisfaction that at its current session the Secretariat had made available the text of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space in the form of a publication (ST/SPACE/49).

101. The Committee noted with appreciation that some States were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space and/or the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines and that other States had developed their own space debris mitigation standards based on those guidelines. The Committee also noted that other States were using the IADC Guidelines and the European Code of Conduct for Space Debris Mitigation as reference points in their regulatory frameworks established for national space activities.

102. The Committee agreed that more States should implement the Space Debris Mitigation Guidelines of the Committee.

103. The view was expressed that more transparency in the information on space debris, as well as on space activities of States, particularly activities that presented a risk of doing harm, was important for States and that it would enhance the awareness and capability of States in space debris monitoring.

104. The view was expressed that States without the capability and expertise to fully implement the Space Debris Mitigation Guidelines of the Committee should benefit from the best practices of and training provided by States with relevant experience.

105. The view was expressed that the Committee should focus on the development of best practices or guidelines for collision avoidance, which would include such topics as pre-launch, pre-manoeuvre and re-entry notification, a registry of operators, common standards, best practices and guidelines and the establishment of national regulatory regimes.

106. Some delegations expressed the view that the States most responsible for the creation of space debris, including debris from platforms with nuclear power sources, and the States having the capability to take action on space debris mitigation should inform the Committee about their actions to reduce the creation of space debris.

107. Some delegations were of the view that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee should cooperate with the aim of developing legally binding rules relating to space debris.

4. Space-system-based disaster management support

108. The Committee took note of the discussion of the Subcommittee under the agenda item on space-system-based disaster management support, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 90-102 and annex I, paras. 10-13).

109. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group of the Whole, which was convened, inter alia, to consider this item (A/AC.105/958, para. 102 and annex I, para. 1).

110. The Committee noted the progress reflected in the reports on the activities carried out in 2009 in the framework of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) (A/AC.105/952 and A/AC.105/955).

111. The Committee noted with appreciation the signing of the host country agreement between the Government of China and the Office for Outer Space Affairs, which would lead to the establishment of the UN-SPIDER Beijing office.

112. The Committee noted with appreciation the cash and in-kind contributions made by the Governments of Austria, Croatia, Germany, the Republic of Korea, Spain and Turkey to support the activities of the UN-SPIDER programme in 2009. The Committee also noted that the UN-SPIDER programme would require additional voluntary contributions to carry out all the activities planned for 2010, as well as of senior experts, provided as non-reimbursable loans, and associate experts. The Committee encouraged Member States to provide the necessary support, including financial support, for the UN-SPIDER programme to carry out its work.

113. The Committee noted with satisfaction that the Office for Outer Space Affairs had so far signed cooperation agreements for the establishment of UN-SPIDER regional support offices with Algeria, Iran (Islamic Republic of), Nigeria, Pakistan, Romania and Ukraine, as well as the Asian Disaster Reduction Centre and the Water Center for the Humid Tropics of Latin America and the Caribbean. The Committee noted with appreciation that the Governments of Colombia, Indonesia, the Philippines and South Africa, as well as the Regional Centre for Mapping of Resources for Development and the University of the West Indies, had each made an offer to host a UN-SPIDER regional support office.

114. The Committee noted with satisfaction the increase in the availability of space-based information to support disaster management, particularly emergency response activities, through several existing mechanisms, such as the Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters (also called the International Charter on Space and Major Disasters), the Sentinel Asia project, and the Global Monitoring for Environment and Security (GMES) Services and Applications for Emergency Response (SAFER) initiative in Europe.

115. The view was expressed that efforts to make Sentinel Asia more effective and user-friendly should be continued so that more Governments and institutions would make use of it. The delegation that expressed that view also considered that the activities of Sentinel Asia, the results of it and the lessons learned could provide useful ideas and a model for disaster management support activities in other regions where no such initiatives had been carried out.

116. The Committee noted the work carried out in the framework of UN-SPIDER SpaceAid, which was supporting interested end-users in having access to and using large amounts of space-based information made available by existing mechanisms and initiatives to support responses to emergency events.

117. The Committee noted that the Office for Outer Space Affairs had established, as outlined in a conference room paper (A/AC.105/2010/CRP.11), the SpaceAid account within the existing Trust Fund for the United Nations Programme on Space Applications. The separate account would be used to receive funds to support the

aims of the SpaceAid framework. The Committee also noted that the Office for Outer Space Affairs would inform member States about the account and invite them to make contributions.

118. The Committee directed the Office for Outer Space Affairs to meet with the International Charter on Space and Major Disasters, Sentinel Asia, the GMES SAFER project, the Mesoamerican Regional Visualization and Monitoring System (SERVIR) project and others with a view to establishing an agreed interface with UN-SPIDER to avoid overlaps and duplication of effort. The Committee requested the Office to report on its efforts to the Scientific and Technical Subcommittee at its forty-eighth session, in 2011.

119. The view was expressed that the use of the SpaceAid account could lead to overlaps in access to and use of existing and readily available resources in responses to disasters. The delegation that expressed that view stressed that the acquisition of imagery by UN-SPIDER could result in the unwillingness of private sector operators of remote-sensing satellites to provide data free of charge to existing initiatives, as many currently do. That delegation stressed that emergency preparedness, response and recovery were the responsibility of each Member State in respect of its population.

5. Recent developments in global navigation satellite systems

120. The Committee took note of the discussion of the Subcommittee under the agenda item on recent developments in GNSS, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 103-121).

121. The Committee noted with appreciation that the International Committee on GNSS (ICG) continued to make significant progress towards the goals of encouraging compatibility and interoperability among global and regional space-based positioning, navigation and timing systems and promoting the use of GNSS and their integration into infrastructures, particularly in developing countries.

122. The Committee noted with appreciation the progress made on the ICG workplan, in particular the adoption of a new principle on transparency in the provision of open services.

123. The Committee noted with appreciation the achievements of the ICG Providers' Forum, as reflected in the publication entitled "Current and planned global and regional navigation satellite systems and satellite-based augmentation systems" (ST/SPACE/50).

124. The Committee noted with appreciation the activities conducted and/or planned in the framework of the ICG workplan focusing on building capacity, specifically in deploying instruments for the International Space Weather Initiative, developing a GNSS education curriculum, utilizing regional reference frames and the application of GNSS in various areas to support sustainable development, as reflected in document A/AC.105/950.

125. Some delegations reiterated their commitment to provide additional funds in the form of voluntary contributions to the Office for Outer Space Affairs in support of the programme on GNSS applications, including the meetings and activities of ICG and its Providers' Forum.

126. The Committee noted with appreciation that the fourth meeting of ICG and the fourth meeting of its Providers' Forum had been held in Saint Petersburg, Russian Federation, in September 2009 (A/AC.105/948).

127. The Committee expressed its appreciation for work undertaken by the Office for Outer Space Affairs in assisting with the planning and organization of the fourth meeting of ICG and for its continued support as executive secretariat for ICG and its Providers' Forum.

128. The Committee noted that the fifth meeting of ICG would be hosted jointly by Italy and the European Commission in Turin, Italy, from 18 to 22 October 2010, and that the sixth meeting would be hosted by Japan in 2011.

6. Use of nuclear power sources in outer space

129. The Committee took note of the discussion of the Subcommittee under the agenda item on the use of nuclear power sources in outer space, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 122-137).

130. The Committee endorsed the decisions and recommendations of the Subcommittee and the Working Group on the Use of Nuclear Power Sources in Outer Space, reconvened under the chairmanship of Sam A. Harbison (United Kingdom) (A/AC.105/958, para. 134 and annex II).

131. The Committee welcomed the endorsement by the Subcommittee at its forty-seventh session of a new multi-year workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space. The Committee noted that the workplan for the period 2010-2015 was aimed at promoting and facilitating the implementation of the Safety Framework for Nuclear Power Source Applications in Outer Space[5] by providing information pertinent to challenges faced by member States and international intergovernmental organizations, in particular those considering or initiating involvement in applications of nuclear power sources in outer space. It was also aimed at identifying technical topics for and establishing the objectives, scope and attributes of any potential additional work by the Working Group to further enhance safety in the development and use of nuclear power source applications in space.

132. Some delegations were of the view that the Safety Framework represented a significant advance in the development of safe nuclear power source applications and that its implementation by Member States and international intergovernmental organizations would provide assurance to the global public that nuclear power source applications would be launched and used in a safe manner.

133. The view was expressed that a closer link should be established between the Scientific and Technical Subcommittee and the Legal Subcommittee with the aim of promoting international norms relevant to matters being considered by the Scientific and Technical Subcommittee under this item, as well as to matters related to space debris.

134. Some delegations expressed the view that it was exclusively States, irrespective of their level of social, economic, scientific or technical development, that had an obligation to engage in the regulatory process associated with the use of

[5] A/AC.105/934.

nuclear power sources in outer space and that the matter concerned all humanity. Those delegations were of the view that Governments bore international responsibility for national activities involving the use of nuclear power sources in outer space conducted by governmental and non-governmental organizations and that such activities must be beneficial, not detrimental, to humanity.

135. Some delegations were of the view that the use of nuclear power sources in outer space should be as limited as possible and that comprehensive and transparent information on measures taken to ensure safety should be provided to other States. Those delegations were of the view that no justification existed for the use of nuclear power sources in terrestrial orbits, for which other sources of energy were available that were much safer and had been proved to be efficient.

7. Near-Earth objects

136. The Committee took note of the discussion of the Subcommittee under the agenda item on near-Earth objects, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 138-152 and annex III).

137. The Committee endorsed the recommendations of the Subcommittee and its Working Group on Near-Earth Objects, which was convened under the chairmanship of Sergio Camacho (Mexico) (A/AC.105/958, para. 152 and annex III).

138. The Committee noted with satisfaction that ASE and SWF, with support from the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC), had organized a workshop in Mexico City on the establishment of an information, analysis and warning network. The Committee also noted with satisfaction that, with support from ASE and SWF, the University of Nebraska-Lincoln (United States) had prepared a report entitled "Legal aspects of NEO threat response and related institutional issues" in order to assist the intersessional work of the Action Team on Near-Earth Objects and the Working Group on Near-Earth Objects of the Scientific and Technical Subcommittee.

139. The Committee noted that, on the margins of its fifty-third session, the Action Team on Near-Earth Objects had held three meetings to consider, among other things, the executive summaries from the workshop referred to in paragraph 138 above.

140. The Committee noted with satisfaction that the Romanian Space Agency would co-organize the IAA Planetary Defence Conference, to be held in Romania in May 2011.

141. The view was expressed that international projects undertaken by Member States to detect and characterize near-Earth objects, such as the Large Millimeter Telescope, could be usefully employed in future international cooperative endeavours to protect the planet from the impact threat of near-Earth objects.

142. The view was expressed that international cooperation was essential for addressing the issues of observing near-Earth objects on a regular basis, data- and information-sharing, and capacity-building for developing countries.

8. Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union

143. The Committee took note of the discussion of the Subcommittee under the agenda item on the examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing countries, without prejudice to the role of the International Telecommunication Union, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 153-161).

144. Some delegations expressed the view that the geostationary orbit was a limited natural resource and that it was at risk of becoming saturated. Those delegations were of the view that the exploitation of the geostationary orbit should, with the participation and cooperation of ITU, be rationalized and made available to all States, irrespective of their current technical capabilities, thus giving them the opportunity to have access to the geostationary orbit under equitable conditions, taking into account in particular the needs of developing countries and the geographical position of certain countries. Those delegations considered that the item on the geostationary orbit should remain on the agenda of the Subcommittee for further discussion, with the purpose of continuing to analyse its scientific and technical characteristics.

145. Some delegations were of the view that the geostationary orbit provided unique potential for social programmes, educational projects and medical assistance. In that regard, those delegations were of the view that the geostationary orbit should be made available taking into account the pertinent ITU regulations, the relevant norms and decisions of the United Nations and in particular annex III to the report of the Legal Subcommittee on its thirty-ninth session (A/AC.105/738).

9. International Space Weather Initiative

146. The Committee took note of the discussion of the Subcommittee under the agenda item on the International Space Weather Initiative, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 162-173).

147. The Committee noted that the International Space Weather Initiative would contribute to the observation of space weather through the deployment of instrument arrays and the sharing of observed data among researchers around the world.

148. The Committee welcomed the fact that participation in the International Space Weather Initiative was open to scientists from all countries, as instrument hosts or instrument providers.

149. The Committee noted that the International Space Weather Initiative offered Member States the opportunity to coordinate the global monitoring of space weather using space- and ground-based assets, assist in consolidating common knowledge and develop essential forecast capabilities to improve the safety of space-based assets.

10. Long-term sustainability of outer space activities

150. The Committee took note of the discussion of the Subcommittee under the agenda item on the long-term sustainability of outer space activities, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 174-203).

151. The Committee endorsed the recommendations of the Scientific and Technical Subcommittee on this item (A/AC.105/958, paras. 179-180 and 184).

152. The Committee welcomed the establishment by the Scientific and Technical Subcommittee of the Working Group on the Long-term Sustainability of Outer Space Activities under the chairmanship of Peter Martinez (South Africa) and endorsed the recommendation of the Subcommittee that the Working Group be allowed to meet during the current session of the Committee to further develop its terms of reference and methods of work.

153. The Committee noted with appreciation that a proposal for the terms of reference and methods of work of the Working Group, as contained in document A/AC.105/L.277, had been submitted by the Chair of the Working Group for consideration by the Working Group.

154. At the 620th meeting, the Chairman of the Working Group informed the Committee about the results of the meeting held by the Working Group at the current session of the Committee.

155. The Committee noted that the proposal for the terms of reference and methods of work of the Working Group would be revised to incorporate, to the extent possible, the comments received from member States during the discussions of the Working Group and would be distributed as a revision to document A/AC.105/L.277.

156. The Committee agreed to invite member States to submit their views and comments on the forthcoming revision to A/AC.105/L.277, with specific emphasis on terms of reference, thematic areas, methods of work and workplan.

157. The Committee agreed to invite member States and the permanent observers of the Committee and the entities referred to in the report of the Scientific and Technical Subcommittee (A/AC.105/958, para. 184) to present information on their activities pertaining to the long-term sustainability of outer space activities, for consideration by the Working Group at the forty-eighth session of the Subcommittee.

158. The Committee agreed to invite member States to nominate their points of contact to facilitate further intersessional progress towards developing the terms of reference and methods of work of the Working Group in preparation for the forty-eighth session of the Scientific and Technical Subcommittee.

159. The view was expressed that actions were necessary to prevent a degradation of the space environment, to extend the benefits of space to all, in particular to developing countries, and to maintain access to space for future generations.

160. The view was expressed that although the preservation of space assets, particularly communication and Earth observation satellites, was critical for social and economic development, there was at present no international space traffic management, nor any mechanism for sharing space awareness information among

all States, and it was essential for member States to actively contribute to the work under this item.

161. The view was expressed that issues relating to ensuring the safety and security of all space activities were among the priorities to be addressed under this agenda item, particularly in view of the collisions and near-collisions of objects in outer space in recent years.

162. The view was expressed that it was impossible to ensure the safety and sustainability of activities in outer space without having security in outer space and that it was important to have a constructive engagement within the Conference on Disarmament on space security.

163. Some delegations were of the view that the work on the long-term sustainability of outer space activities should not be limited to the safety and security interests of States with advanced space activities, but should also focus on ensuring equitable and rational access to outer space, which was a limited resource and at risk of saturation.

164. The view was expressed that the consideration of the long-term sustainability of outer space activities should not be used as a pretext for States that had been able to develop their space capabilities without controls, resulting in the challenges faced today, to restrict or impose controls on other States wishing to exercise their legitimate right to use the same technology for their national benefit.

165. The view was expressed that the consideration of the long-term sustainability of outer space activities should not be used as a means to promote commercial activities in outer space to the detriment of the interests of States and that it was necessary to take into account international law, the Charter of the United Nations and treaties on outer space in the consideration of this item.

166. The view was expressed that a joint working group should be established in cooperation with ITU to address matters relating to the achievement of consensus on the sustainable use of outer space.

167. The view was expressed that collision avoidance should be the emphasis of the best-practice guidelines to be developed under this item and that pre-launch, pre-manoeuvre and re-entry notifications, a registry of operators, common standards, best practices and guidelines and, eventually, the establishment of national regulatory regimes should be addressed.

168. The view was expressed that decisions related to this agenda item were under the exclusive responsibility of States members of the Committee.

11. Draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee

169. The Committee took note of the discussion of the Subcommittee on the agenda item on the draft provisional agenda for the forty-eighth session of the Scientific and Technical Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/958, paras. 204-206 and annex I, sect. V).

170. On the basis of the deliberations of the Scientific and Technical Subcommittee at its forty-seventh session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its forty-eighth session:

1. General exchange of views and introduction of reports submitted on national activities.

2. United Nations Programme on Space Applications.

3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).

4. Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth's environment.

5. Space debris.

6. Space-system-based disaster management support.

7. Recent developments in global navigation satellite systems.

8. Items to be considered under workplans:

   (a) Use of nuclear power sources in outer space;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 8 of annex II to the report of the Scientific and Technical Subcommittee on its forty-seventh session (A/AC.105/958))

   (b) Near-Earth objects;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 11 of annex III to the report of the Scientific and Technical Subcommittee on its forty-fifth session (A/AC.105/911))

   (c) International Space Weather Initiative;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 16 of annex I to the report of the Scientific and Technical Subcommittee on its forty-sixth session (A/AC.105/933))

   (d) Long-term sustainability of outer space activities;

   (Work for 2011 as reflected in the multi-year workplan in paragraph 161 of the report of the Committee on the Peaceful Uses of Outer Space on its fifty-second session.)[6]

9. Single issue/item for discussion: Examination of the physical nature and technical attributes of the geostationary orbit and its utilization and applications, including in the field of space communications, as well as other questions relating to developments in space communications, taking particular account of the needs and interests of developing

[6] *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 20* (A/64/20), para. 161.

countries, without prejudice to the role of the International Telecommunication Union.

10. Draft provisional agenda for the forty-ninth session of the Scientific and Technical Subcommittee, including identification of subjects to be dealt with as single issues/items for discussion or under multi-year workplans.

171. The Committee endorsed the recommendation that the Working Group of the Whole, the Working Group on the Use of Nuclear Power Sources in Outer Space, the Working Group on Near-Earth Objects and the Working Group on the Long-term Sustainability of Outer Space should be reconvened at the forty-eighth session of the Scientific and Technical Subcommittee.

172. The Committee agreed that two hours of each session of the Subcommittee from 2011 to 2013 should be available for holding workshops under the workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space on the item "Use of nuclear power sources in outer space" (A/AC.105/958, annex II, paras. 8 and 10).

173. The Committee welcomed the agreement of the Subcommittee that the topic for the symposium to be organized in 2011 by the Committee on Space Research should be "Planetary protection" (A/AC.105/958, annex I, para. 15).

D. Report of the Legal Subcommittee on its forty-ninth session

174. The Committee took note with appreciation of the report of the Legal Subcommittee on its forty-ninth session (A/AC.105/942), which contained the results of its deliberations on the items considered by the Subcommittee in accordance with General Assembly resolution 64/86.

175. The Committee expressed its appreciation to Ahmad Talebzadeh (Islamic Republic of Iran) for his able leadership during the forty-ninth session of the Subcommittee.

176. The representatives of Austria, Canada, China, the Czech Republic, Japan, Indonesia, Italy, the Russian Federation, Saudi Arabia, the United States and Venezuela (Bolivarian Republic of) made statements under the item. During the general exchange of views, statements relating to this item were also made by representatives of other member States and by the observer for Costa Rica on behalf of the Group of Latin American and Caribbean States.

1. Status and application of the five United Nations treaties on outer space

177. The Committee took note of the discussion of the Subcommittee under its agenda item on the status and application of the five United Nations treaties on outer space, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 27-41).

178. The Committee endorsed the decisions and recommendations of the Subcommittee and its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, which had been reconvened under the chairmanship of Jean François Mayence (Belgium) (A/AC.105/942, paras. 28, 31 and 40 and annex I, paras. 5-8).

179. Some delegations were of the view that the United Nations treaties on outer space represented a solid legal structure that was crucial for supporting the increasing scale of space activities and for strengthening international cooperation in the peaceful uses of outer space. Those delegations welcomed further adherence to the treaties and hoped that those States that had not yet ratified or acceded to the treaties would consider becoming parties to them.

180. Some delegations were of the view that the Committee should review, update and modify the five treaties for the purpose of strengthening the guiding principles of outer space activities, in particular those principles that guarantee its peaceful use, strengthen international cooperation and make space technology available to humanity.

181. Some delegations expressed the view that a comprehensive legal instrument on space could be negotiated and concluded without prejudice to the existing legal framework for space activities.

182. The view was expressed that negotiating a new, comprehensive convention on outer space would be counterproductive and could undermine the existing international legal regime governing outer space activities, particularly the principles contained in articles I and II of the Outer Space Treaty.

183. The view was expressed that the involvement of new spacefaring nations in outer space activities and the expansion of outer space activities made it necessary to have universal adherence to the United Nations treaties on outer space in order to preserve, advance and guarantee the exploration and use of outer space for peaceful purposes.

2. Information on the activities of international intergovernmental and non-governmental organizations relating to space law

184. The Committee took note of the discussion of the Subcommittee under the item on information on the activities of international intergovernmental and non-governmental organizations relating to space law, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 42-54).

185. The Committee noted the important role of international intergovernmental and non-governmental organizations and their contribution to its endeavours to promote the development of space law.

186. The Committee noted the role played by intergovernmental organizations in providing platforms for strengthening the legal framework applicable to space activities and invited the organizations to consider taking steps to encourage their members to adhere to the outer space treaties.

3. Matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit, without prejudice to the role of the International Telecommunication Union

187. The Committee took note of the discussion of the Subcommittee under the agenda item on matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of

ways and means to ensure the rational and equitable use of the geostationary orbit, without prejudice to the role of ITU, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 55-75).

188. The Committee endorsed the recommendations of the Subcommittee and its Working Group on the Definition and Delimitation of Outer Space, reconvened under the chairmanship of José Monserrat Filho (Brazil) (A/AC.105/942, para. 57 and annex II, para. 11).

189. Some delegations expressed the view that the lack of a definition or delimitation of outer space created legal uncertainty concerning the applicability of space law and air law and that matters concerning State sovereignty and the boundary between airspace and outer space needed to be clarified in order to reduce the possibility of disputes among States.

190. Some delegations were of the view that the Subcommittee, when considering matters relating to the definition and delimitation of outer space, should take into account recent and future technological developments, and that the Scientific and Technical Subcommittee should also consider this subject.

191. The view was expressed that it was important to establish legal criteria for the definition and delimitation of outer space. The delegation expressing that view drew the attention of the Committee to the proposals made by the Union of Soviet Socialist Republics at the twenty-second and twenty-sixth sessions of the Legal Subcommittee, in 1983 and 1987, regarding the establishment of a border between airspace and outer space at an altitude of 110 km and the right of passage of space objects through the airspace of other States in order to have access to and exit from the near-Earth orbit.

192. Some delegations were of the view that use of the geostationary orbit, which was a limited natural resource, not only should be rational but should be made available to all States, irrespective of their current technical capacities. That would allow States to have access to the orbit under equitable conditions, bearing in mind in particular the needs and interests of developing countries, as well as the geographical position of certain countries, and taking into account the processes of ITU and relevant norms and decisions of the United Nations. Those delegations expressed their satisfaction with the agreement reached by the Subcommittee at its thirty-ninth session (see A/AC.105/738, annex III) to the effect that coordination among countries aimed at the utilization of the geostationary orbit should be carried out in a rational and equitable manner and in conformity with the ITU Radio Regulations.

193. Some delegations were of the view that the geostationary orbit, as a limited natural resource clearly in danger of saturation, must be used rationally, efficiently, economically and equitably. That principle was deemed fundamental to safeguarding the interests of developing countries and countries with certain geographical positions, as set out in article 44, paragraph 196.2, of the Constitution of ITU, as amended by the Plenipotentiary Conference held in Minneapolis, United States, in 1998.

194. Some delegations were of the view that access to the geostationary orbit, as a limited natural resource that had sui generis characteristics and that was at risk of saturation, should be guaranteed for all States, taking into account in particular the

needs and interests of developing countries and the geographical position of certain countries.

195. Some delegations were of the view that the principle of "first come, first served" was unacceptable with regard to the utilization of orbital positions and that it discriminated against States that wished to enjoy the benefits of space technology and did not yet have the necessary capabilities.

196. Some delegations were of the view that the geostationary orbit could not be appropriated by States or by international intergovernmental and non-governmental organizations.

197. The view was expressed that the discussion of the geostationary orbit by the Legal Subcommittee should be aimed at finding ways to ensure its utilization for the benefit of all States. The delegation that expressed that view considered that the Committee and the Subcommittee should cooperate and coordinate their work with other related international organizations to ensure equitable access to the geostationary orbit for all States.

4. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

198. The Committee took note of the discussion of the Subcommittee under the agenda item on the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space,[7] as reflected in the report of the Subcommittee (A/AC.105/942, paras. 76-88).

199. The Committee endorsed the recommendation of the Subcommittee on this item (A/AC.105/942, para. 87).

200. Some delegations expressed the view that close communication should be maintained among the Scientific and Technical Subcommittee, the Legal Subcommittee and other relevant bodies of the United Nations system with the aim of promoting the development of binding international standards that address the use of nuclear power sources in outer space.

201. The view was expressed that the review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as well as the elaboration of a new binding instrument on the use of nuclear power sources in outer space, were not warranted.

202. The view was expressed that the Committee, through its Legal Subcommittee, should undertake a review of the Safety Framework for Nuclear Power Source Applications in Outer Space and promote binding standards with a view to ensuring that any activity conducted in outer space was governed by the principles of preservation of life and maintenance of peace. The delegation that expressed that view considered that any activities arising as a result of the new workplan for the period 2010-2015 of the Working Group on the use of Nuclear Power Sources in Outer Space of the Scientific and Technical Subcommittee should be approved by the Legal Subcommittee.

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[7] General Assembly resolution 47/68.

203. The view was expressed that recommendations from the Safety Framework might be considered in further detail for possible implementation in the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, if and when the Principles were reviewed and revised.

5. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment

204. The Committee took note of the discussion of the Subcommittee under the item on the examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 89-106).

205. The Committee endorsed the recommendations of the Subcommittee on this item (A/AC.105/942, paras. 104 and 105).

206. The Committee noted that the third session of the committee of governmental experts of the International Institute for the Unification of Private Law (Unidroit) had been held in Rome from 7 to 11 December 2009 as a result of the progress made by the steering committee, and that its fourth session had been held in Rome from 3 to 7 May 2010.

207. The view was expressed that input from all major stakeholders, including Governments and the commercial and financial sectors of the space community, should be carefully considered and reflected in the revision of the draft protocol.

6. Capacity-building in space law

208. The Committee took note of the discussion of the Subcommittee under the item on capacity-building in space law, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 107-126).

209. The Committee endorsed the recommendations of the Subcommittee on the agenda item (A/AC.105/942, paras. 117 and 123).

210. The Committee agreed that research, training and education in space law were of paramount importance to national, regional and international efforts to further develop space activities and to increase knowledge of the legal framework within which space activities were carried out.

211. The Committee noted with appreciation that the Government of Thailand and the Geo-Informatics and Space Technology Development Agency of Thailand, together with the Office for Outer Space Affairs, planned to hold the seventh United Nations workshop on space law in Bangkok from 16 to 19 November 2010. The Committee further noted with appreciation that ESA was a co-sponsor of the workshop.

212. The Committee noted that the exchange of views on national and international efforts to promote a wider appreciation of space law and endeavours such as the annual workshops on space law and the development of the curriculum on space law were playing a vital role in building capacity in this area.

213. The view was expressed that the arrangements for the establishment of a regional centre for space science and technology education in Arabic, affiliated to the United Nations, should be made in close cooperation with the Office for Outer Space Affairs.

7. General exchange of information on national mechanisms relating to space debris mitigation measures

214. The Committee took note of the discussion of the Subcommittee under the item on national mechanisms relating to space debris mitigation measures, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 127-148).

215. The Committee endorsed the recommendations of the Subcommittee on this item (A/AC.105/942, para. 147).

216. The Committee noted that some States had strengthened their national mechanisms governing space debris mitigation through the nomination of governmental supervisory authorities, the involvement of academia and industry and the development of new legislative norms, instructions, standards and frameworks.

217. The view was expressed that this item provided member States and permanent observers with the opportunity to exchange information on steps taken by States to control the creation and effects of space debris and served as a helpful vehicle to continue the important work of the Committee in the area of space debris mitigation.

218. The view was expressed that space debris posed a serious threat to countries located along the equator.

219. Some delegations were of the view that the Space Debris Mitigation Guidelines of the Committee should be further developed and that the Scientific and Technical Subcommittee and the Legal Subcommittee should cooperate with the aim of developing legally binding rules relating to space debris.

220. The view was expressed that the development of a special convention on space debris, including nuclear power sources, was not warranted.

221. Some delegations were of the view that the Subcommittee should include on its agenda an item to review the legal aspects of the Space Debris Mitigation Guidelines of the Committee with a view to the Subcommittee's transforming them into a set of principles on space debris to be adopted by the General Assembly. Those delegations also considered that the adoption of such principles would enrich the current body of law governing outer space.

222. The view was expressed that the Space Debris Mitigation Guidelines of the Committee required legal review and analysis.

223. The view was expressed that since the adoption of the United Nations treaties on outer space, many space-related issues had emerged that were not envisaged in the treaties. The delegation expressing that view considered that in order to meet the challenges of this changing situation, such as space debris mitigation, the Legal Subcommittee should explore the possibility of developing appropriate new rules, including soft laws.

8. General exchange of information on national legislation relevant to the peaceful exploration and use of outer space

224. The Committee took note of the discussion of the Subcommittee under the item on national legislation relevant to the peaceful exploration and use of outer space, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 149-159).

225. The Committee endorsed the recommendations of the Subcommittee and its Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, reconvened under the chairmanship of Irmgard Marboe (Austria) (A/AC.105/942, para. 150 and annex III, paras. 19-22).

226. The Committee noted with satisfaction that the discussions of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space had allowed States to gain an understanding of existing national regulatory frameworks and that the work being conducted under this item was already yielding concrete results, including the sharing of valuable experience of States in the development of their national legislation.

9. Draft provisional agenda for the fiftieth session of the Legal Subcommittee

227. The Committee took note of the discussion of the Subcommittee under the agenda item on the draft provisional agenda for the fiftieth session of the Legal Subcommittee, as reflected in the report of the Subcommittee (A/AC.105/942, paras. 160-172).

228. On the basis of the deliberations of the Legal Subcommittee at its forty-ninth session, the Committee agreed that the following substantive items should be considered by the Subcommittee at its fiftieth session:

Regular items

1. General exchange of views.
2. Status and application of the five United Nations treaties on outer space.
3. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
4. Matters relating to:
   (a) The definition and delimitation of outer space;
   (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.

Single issues/items for discussion

5. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.
6. Examination and review of the developments concerning the draft protocol on matters specific to space assets to the Convention on International Interests in Mobile Equipment.

7. Capacity-building in space law.

8. General exchange of information on national mechanisms relating to space debris mitigation measures.

Items considered under workplans

9. General exchange of information on national legislation relevant to the peaceful exploration and use of outer space.

(Work for 2011: as reflected in paragraph 136 of the report of the Legal Subcommittee on its forty-sixth session (A/AC.105/891).)

New items

10. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-first session.

229. The Committee agreed that the Legal Subcommittee should, at its fiftieth session, reconvene the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, the Working Group on Matters Relating to the Definition and Delimitation of Outer Space and the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space.

230. The Committee agreed that the Subcommittee should review, at its fiftieth session, the need to extend the mandate of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space beyond that session of the Subcommittee.

231. The Committee agreed that the International Institute of Space Law and the European Centre for Space Law should be invited to organize a symposium on space law at the fiftieth session of the Subcommittee.

232. The view was expressed that an item on reviewing the Space Debris Mitigation Guidelines of the Committee with a view to transforming them into a set of principles should be included on the agenda of the Legal Subcommittee.

E. Spin-off benefits of space technology: review of current status

233. The Committee considered the agenda item entitled "Spin-off benefits of space technology: review of current status", in accordance with General Assembly resolution 64/86.

234. The representatives of China, Germany, India, Japan and the United States made statements under the item.

235. The Committee heard the following presentations:

(a) "JAXA industrial collaboration", by the representative of Japan;

(b) "NASA technologies: for the benefit of all mankind", by the representative of the United States;

(c) "Fifth Space Conference of the Americas: regional space cooperation for security and human development; perspective for the future", by the representative of Ecuador.

236. The publication *Spinoff 2009*, submitted by the National Aeronautics and Space Administration of the United States, was made available to the Committee.

237. The Committee took note of the information provided by States on their national practices regarding spin-offs of space technology that had resulted in the introduction of useful innovations in various scientific and practical areas of civil society, such as medicine, biology, chemistry, astronomy, agriculture, aviation, land transport, firefighting, protection of nature and energy.

238. The Committee agreed that spin-offs of space technology constituted a powerful engine for technological innovation and growth in both the industrial and service sectors and could be beneficially applied to achieve social and humanitarian objectives and the development of national communications infrastructure, and in projects aimed at achieving the goal of sustainable development.

239. The Committee agreed that spin-offs of space technology should be promoted because they fostered innovative technologies, thus advancing economies and contributing to the improvement of the quality of life.

240. The Committee noted that Governments of Member States had successfully involved the private sector and academia in various projects in the area of spin-offs of space technology.

241. The Committee agreed to continue its consideration of the item at its fifty-fourth session, in 2011.

F. Space and society

242. The Committee considered the agenda item entitled "Space and society", in accordance with General Assembly resolution 64/86. The Committee focused its discussions on the theme "Space and education".

243. The representatives of Canada, China, Colombia, India, Japan, the Libyan Arab Jamahiriya, Nigeria, the Syrian Arab Republic, the United States and Venezuela (Bolivarian Republic of) made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views. The observer for UNESCO also made a statement.

244. The Committee heard the following presentations:

(a) "Italian Master in space policy and institutions", by the representative of Italy;

(b) "Bringing space to Canadian classrooms", by the representative of Canada;

(c) "Building peace in young minds through space education: contributions of JAXA Space Education Centre to human development", by the representative of Japan;

(d) "Fifty years of operational environmental satellites: the US experience", by the representative of the United States;

(e) "Space education: international outreach activities of India", by the representative of India;

(f) "International Year of Astronomy 2009: achievements, legacy and way forward", by the observer for UNESCO;

(g) "The Space Generation Congress 2009: perspectives from university students and young professionals in the space sector", by the observer for SGAC.

245. The Committee noted the information provided by States on their actions and programmes aimed at attracting young people to the field of space by making them aware of the importance and significance of space science, technology and applications.

246. The Committee agreed that it was important for States to ensure that space-related educational programmes remained relevant to youth and that States should collaborate closely in this area so that youth would benefit from understanding the interconnectivity among States and the present and future challenges facing humankind.

247. The Committee noted the beneficial uses of space applications for society and their increasing use by developing countries as tools to achieve development goals in such areas as telemedicine, eradication of illicit crops and land planning.

248. The Committee noted the important role of space education in inspiring students to pursue careers in science, technology, engineering and mathematics, in strengthening national capabilities in science and industry and in enhancing educational opportunities through the use of distance-learning technologies such as tele-education and e-learning.

249. The Committee noted with satisfaction that, at the global level, a large number of outreach activities and programmes for children, young people and the general public were being established by national space and educational organizations and international organizations to promote awareness of the benefits of space science and technology and to encourage children to consider careers in mathematics and science.

250. The Committee noted that World Space Week, observed from 4 to 10 October each year pursuant to General Assembly resolution 54/68, contributed to the development of education and provided an important opportunity to sensitize youth and the general public to the benefits of space science and technology. The Committee recognized the valuable contributions made by member States, the World Space Week Association and other organizations for the observance of World Space Week.

251. The Committee noted that the General Assembly, in its resolution 62/200, had declared 2009 International Year of Astronomy and that a number of States used the Year to highlight the importance of space science and technology and to strengthen international cooperation in space education. A number of successful initiatives were reported, such as dedicated national websites, software programs, special issues of scientific magazines, television broadcasts, stamps, poster contests and

several coordinated initiatives among partners from government, academia and civil society.

252. The Committee noted the activities carried out at the regional level for capacity-building through education and training in space science and technology applications for sustainable development.

253. The Committee noted with appreciation the role of regional centres for space science and technology education, affiliated to the United Nations, in space-related education.

254. The Committee noted the role played by the International Space Station in education and in reaching out to education communities worldwide.

255. The view was expressed that the Committee and its subsidiary bodies continued to play a substantial role in providing a global framework for the systematic exchange of experience and information, as well as in the coordination of capacity-building efforts, as reflected in the Plan of Action of the Committee endorsed by the General Assembly in its resolution 59/2.

256. The view was expressed that, while the exchange of information and experiences on a variety of initiatives relating to space education had been important and should continue, it could also be useful to focus the efforts of the Committee on a few specific priority areas that could have a greater impact on the enhancement of space education, such as sharing challenges that States encountered in expanding and promoting space education activities.

257. The Committee agreed that, as recommended by the Working Group of the Whole at the forty-seventh session of the Scientific and Technical Subcommittee (A/AC.105/958, para. 55 and annex I, para. 9) the issue of promoting the greater participation of young people in space science and technology would be considered by the Committee under the item "Space and society".

258. The Committee agreed that, in view of the importance of the theme "Space and education", it would continue to consider the special theme at its fifty-fourth session, in 2011.

G. Space and water

259. The Committee considered the agenda item entitled "Space and water", in accordance with General Assembly resolution 64/86.

260. The representatives of China, Germany, India, Japan and the Syrian Arab Republic made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views.

261. In the course of the discussions, delegations reviewed national and cooperative water-related activities, giving examples of national programmes and bilateral, regional and international cooperation.

262. The Committee noted that many States were confounded by the broad spectrum of serious water-related issues — ranging from lack of water, and the resulting impact on populations and food production, to overabundance of water,

causing floods and destruction — which constituted a significant threat to the sustainable development of human societies.

263. The Committee noted that space-derived data were used extensively in water management and that space technology and applications played an active role in addressing most water-related issues.

264. The Committee noted that space technology and its applications had growing potential to provide useful information for scientific research on water-related issues and to support water management and policy- and decision-making with a view to efficient and sustainable use of water resources.

265. The Committee further noted that space technology could be used in combination with non-space technologies to contribute to the observation of global water cycles and the monitoring and mitigation of the effects of flood, drought and earthquake disasters, and to improve the timeliness and accuracy of forecasts.

266. The Committee agreed to continue its consideration of the item at its fifty-fourth session, in 2011.

H. Space and climate change

267. The Committee considered the agenda item entitled "Space and climate change", in accordance with General Assembly resolution 64/86.

268. The representatives of Brazil, India, Japan, Malaysia, Mexico, Saudi Arabia and the United States made statements under this item. The representatives of France and Germany made a joint statement. Representatives of other member States also made statements relating to this item during the general exchange of views.

269. The Committee heard the following presentations under this item:

(a) "The application of satellite remote sensing on climate change and food security in Indonesia", by the representative of Indonesia;

(b) "Mission objectives and current status of GOSAT (IBUKI)", by the representative of Japan.

270. The Committee noted that the adverse effects of climate change constituted a threat to all humanity and were manifested in a variety of phenomena, such as unusual weather, including droughts in some regions and floods in others; unusual dust storms in the Arabian region; glacial retreat in the Himalayas; and changes in the polar ice sheets.

271. The Committee noted that, because of the global nature of climate change, global observations were required to monitor it more precisely, and that space-based observations, complemented with ground-based observations, were well suited to monitor the different manifestations of climate change and the factors contributing to it.

272. The Committee noted the efforts conducted in various countries regarding the deployment of satellites carrying a variety of instruments to measure some essential climate variables and to monitor different processes related to climate change, such

as emissions of greenhouse gases and aerosols, atmospheric dynamics, deforestation emissions and land degradation.

273. The Committee noted international efforts conducted under the auspices of the United Nations system (in particular, the United Nations Framework Convention on Climate Change and the World Meteorological Organization (WMO)), as well as other international initiatives targeting climate change, such as those of the Committee on Earth Observation Satellites, the Group on Earth Observations, the Global Earth Observation System of Systems, GMES and the Intergovernmental Panel on Climate Change.

274. Some delegations were of the view that the Committee should play a more proactive role in advocating international cooperation in the deployment and use of satellites to observe the effects of climate change, including in terms of disasters.

I. Use of space technology in the United Nations system

275. The Committee continued its consideration of the agenda item entitled "Use of space technology in the United Nations system", in accordance with General Assembly resolution 64/86.

276. The representatives of Colombia, Germany and the United Arab Emirates made statements under the item. Representatives of other member States also made statements relating to this item during the general exchange of views. The observer for ITU made a statement, in his capacity as Chair of the United Nations Inter-Agency Meeting on Outer Space Activities at its thirtieth session, to inform the Committee about the results of that meeting.

277. The Committee had before it the report of the Inter-Agency Meeting on Outer Space Activities on its thirtieth session (A/AC.105/960), which had been held in Geneva from 10 to 12 March 2010, and the report of the Secretary-General on the coordination of space-related activities within the United Nations system: directions and anticipated results for the period 2010-2011 (A/AC.105/961).

278. The Committee noted with appreciation the measures and decisions taken by the Inter-Agency Meeting to further strengthen its role as a central mechanism of the United Nations for the coordination of space-related activities, namely:

(a) The reorientation of the report of the Secretary-General to allow for a stronger emphasis on the United Nations development agenda and a contribution to the work of the Commission on Sustainable Development;

(b) The agreement on the preparation of biennial special reports on selected thematic areas;

(c) The agreement to hold the annual sessions of the Inter-Agency Meeting in Geneva to facilitate greater participation of United Nations entities and programmes.

279. The Committee noted with appreciation that the special report for 2011, to be prepared by WMO in cooperation with the Office for Outer Space Affairs and the United Nations Framework Convention on Climate Change secretariat, would

address climate change and the use of space technology in the United Nations system.

280. The Committee noted that the seventh open informal session for States members and observers of the Committee, on the theme "Space technology for emergency communications" had been held immediately following the thirtieth session of the Inter-Agency Meeting, on 12 March 2010.

281. The Committee noted with satisfaction that the Secretariat continued to maintain a website on the coordination of outer space activities within the United Nations system (www.uncosa.unvienna.org). The presentations made at the thirtieth session of the Inter-Agency Meeting and the subsequent open informal session, as well as other information on the current space-related activities of United Nations entities, are available on that website.

282. The Committee noted that the Office for Outer Space Affairs, as secretariat of the Inter-Agency Meeting, was coordinating with the Office of the United Nations High Commissioner for Refugees (UNHCR) for the hosting of its thirty-first session, in Geneva in 2011, and that the open informal session, open to all members and permanent observers of the Committee, would be held in the afternoon of the last day of the session. The theme would be selected in consultation with UNHCR and other participating United Nations entities.

283. Some delegations welcomed the working paper by the Chair of the Committee for the period 2008-2009 entitled "Towards a United Nations space policy" (A/AC.105/L.278) and noted that the paper proposed a holistic approach for enhancing coordination between member States and the United Nations in applying space science and technology to meet the challenges to development of all countries.

284. Some delegations expressed the view that the working paper deserved further discussion with a view to developing and elaborating on the issues addressed therein.

J. International cooperation in promoting the use of space-derived geospatial data for sustainable development

285. The Committee considered the agenda item entitled "International cooperation in promoting the use of space-derived geospatial data for sustainable development", in accordance with General Assembly resolution 64/86.

286. The representatives of Belgium, Brazil, China, Germany, India, Indonesia, Malaysia, the United Kingdom and the United States made statements under the item. Other member States made statements related to this item during the general exchange of views.

287. The Committee heard the following technical presentations under the item:

(a) "OCEANSAT-2: meeting global demand", by the representative of India;

(b) "Geo-wiki.org: how community remote sensing can help to improve global land cover", by the representative of Austria;

(c) "Utilizing space geospatial data for complex diagnosis of earthquake precursors", by the representative of the Russian Federation;

(d) "International Global Monitoring Aerospace System: new approach to the disaster management issue", by the representative of the Russian Federation.

288. In the course of the discussion, delegations reviewed national and cooperative activities in promoting the use of space-derived geospatial data for sustainable development, providing examples of national programmes and bilateral, regional and international cooperation.

289. The Committee noted the importance of remote-sensing applications and spatial data infrastructures for decisions in the areas of socio-economic and environmental management, which relied heavily on the availability of accurate data on natural resources and other geospatial data.

290. The Committee noted that a number of organizations and initiatives at the regional and global levels, such as the Committee on Earth Observation Satellites, the European Umbrella Organisation for Geographic Information and the Group on Earth Observations, contributed to capacity-building and to the coordination and promotion of activities related to the use of space-derived geospatial data, as well as sharing data from current and future satellite systems and opening up access to previously unavailable data sets.

291. The Committee noted the increased availability of space-based data at little or no cost, including those provided by the China-Brazil Earth resources satellites, the Greenhouse Gases Observing Satellite of Japan and the United States Landsat image archive.

292. The Committee noted the activities being carried out by the United Nations Geographic Information Working Group, currently co-chaired by the Office for Outer Space Affairs and the Economic Commission for Africa, which was addressing common geospatial issues in the United Nations system and working towards implementation of the United Nations Spatial Data Infrastructure.

293. The view was expressed that because the Earth was a home shared by all humankind, it was a responsibility of States to promote the use of space-derived geospatial data for sustainable development through extensive international cooperation.

294. The view was expressed that transparency and clarity should be encouraged in mechanisms to guarantee that developing countries have access to geospatial data for the advancement of sustainable development.

295. The Committee noted that, in response to the agreement reached at its fifty-second session, the delegation of Brazil had held informal consultations with all interested members of the Committee to reach consensus on a set of recommendations on ways and means to foster international cooperation with a view to building up national infrastructures for the use of space-derived geospatial data. On the basis of those consultations, the Committee considered a draft report (A/AC.105/2010/CRP.16) and agreed that that text should constitute the final report

of the Committee on international cooperation in promoting the use of space derived geospatial data for sustainable development.[8]

K. Other matters

296. The Committee considered the agenda item entitled "Other matters", in accordance with General Assembly resolution 64/86.

297. The representatives of Algeria, Belgium, Bolivia (Plurinational State of), Canada, Chile, China, Colombia, Cuba, the Czech Republic, Ecuador, France, Germany, Iran (Islamic Republic of), Italy, the Libyan Arab Jamahiriya, Mexico, Nigeria, Pakistan, Saudi Arabia, Slovakia, Spain, the Sudan, Switzerland, the Syrian Arab Republic, the United Kingdom, the United States and Venezuela (Bolivarian Republic of) made statements under the item. The observer for Costa Rica also made a statement.

298. The observers for IAASS and the Association of Remote Sensing Centres in the Arab World also made statements under the item.

1. Proposed strategic framework for the programme on the peaceful uses of outer space for the period 2012-2013

299. The Committee had before it for its consideration the proposed strategic framework for the programme on the peaceful uses of outer space for the period 2012-2013 (A/65/6 (Prog. 5)). The Committee agreed on the proposed strategic framework.

2. Composition of the bureaux of the Committee and its subsidiary bodies for the period 2012-2013

300. In accordance with General Assembly resolution 64/86 and pursuant to the measures relating to the working methods of the Committee and its subsidiary bodies[9] as endorsed by the General Assembly in its resolution 52/56, the Committee considered the composition of the bureaux of the Committee and its subsidiary bodies for the period 2012-2013.

301. The Committee noted that the Group of Asian States had endorsed the candidature of Yasushi Horikawa (Japan) for the office of Chair of the Committee for the period 2012-2013 (A/AC.105/2010/CRP.9).

302. The Committee noted that the Group of Western European and Other States had endorsed the candidature of Filipe Duarte Santos (Portugal) for the office of First Vice-Chair of the Committee for the period 2012-2013 (A/AC.105/2010/CRP.10).

303. The Committee noted that the Group of Latin American and Caribbean States had endorsed the candidature of Félix Clementino Menicocci (Argentina) for the

[8] To be issued as A/AC.105/973.

[9] *Official Records of the General Assembly, Fifty-second Session, Supplement No. 20* (A/52/20), annex I; see also *Official Records of the General Assembly, Fifty-eighth Session, Supplement No. 20* (A/58/20), annex II, appendix III.

office of Chair of the Scientific and Technical Subcommittee for the period 2012-2013 (A/AC.105/2010/CRP.14).

304. The Committee noted that the Group of Eastern European States and the Group of African States would nominate their candidates for the offices of Second Vice-Chair/Rapporteur of the Committee and Chair of the Legal Subcommittee, respectively, for the period 2012-2013 before the next meeting of the Committee.

3. Membership of the Committee

305. The Committee welcomed the application of Tunisia for membership of the Committee (see A/AC.105/2010/CRP.3).

306. The Committee decided to recommend to the General Assembly at its sixty-fifth session, in 2010, that Tunisia should become a member of the Committee.

4. Observer status

307. The Committee welcomed the additional information provided by IAASS in accordance with the request made by the Committee at its fifty-second session, in 2009.[10] The application of IAASS is contained in conference room papers A/AC.105/2009/CRP.8 and A/AC.105/2010/CRP.4 and Add.1.

308. The Committee decided to recommend that the General Assembly, at its sixty-fifth session, grant to IAASS the status of permanent observer of the Committee on the understanding that, in accordance with the agreement of the Committee at its thirty-third session concerning observer status for non-governmental organizations and in accordance with the practice established by the Committee, IAASS would apply for consultative status with the Economic and Social Council.

309. The Committee took note of the application of the Association of Remote Sensing Centres in the Arab World. The relevant correspondence was before the Committee in conference room paper A/AC.105/2010/CRP.5.

310. The Committee agreed to invite the Association of Remote Sensing Centres in the Arab World to participate in its fifty-fourth session, as well as in the sessions of the Subcommittees in 2011, with a view to the Association's provision of additional written information, and that a decision on its application would be made by the Committee at that session.

311. The Committee agreed that observer status would be granted to non-governmental organizations on a provisional basis, for a period of three years, pending information on the status of their application for consultative status with the Economic and Social Council. The Committee agreed that the provisional observer status could be extended for an additional year, if necessary. The Committee further agreed that it would grant permanent observer status to such non-governmental organizations upon confirmation of their consultative status with the Council.

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[10] Ibid., *Sixty-fourth Session, Supplement No. 20* (A/64/20), para. 312.

312. Some delegations expressed the view that the requirement for permanent observers to have consultative status with the Economic and Social Council should be suspended. Those delegations were also of the view that the Committee should be fully competent to independently assess applications from non-governmental organizations.

313. The Committee agreed that the Secretariat should contact the Committee on Non-Governmental Organizations of the Economic and Social Council to verify the application process and the duration of the procedure for granting consultative status with the Council.

5. Organizational matters

314. The Committee recalled that at its fifty-second session, in 2009, it had requested the members of its bureau and the bureaux of its subsidiary bodies to consider how to rationalize and optimize the use of the time of the Committee and its subsidiary bodies, taking into account the need strike a balance between technical presentations, which brought great value, and the substantive consideration of the issues before the Committee and its subsidiary bodies, which required adequate time.

315. The Committee requested the Secretariat, in close consultation with the members of the bureaux of the Committee and its subsidiary bodies, to implement measures to rationalize and optimize the use of time of the Committee and its Subcommittees, taking into account the need for maximum flexibility in organizing the work of their sessions in 2011, including the possibility of scheduling symposiums in the second week of a session.

316. To enable the Committee and its Subcommittees to commence their consideration of all the items on their agendas in a timely and balanced manner, the Committee agreed that the possibility of scheduling the item entitled "General exchange of views" over a longer period of time during their sessions should be explored. The Committee agreed that the Secretariat should coordinate with delegations on the rescheduling of statements under that item to a later meeting so as to allow sufficient time for other agenda items to be considered as planned.

317. The Committee agreed that the reports to be submitted by Member States on their national activities in outer space (see A/AC.105/958, para. 19) should comprise a summary of those activities and not exceed three pages.

318. The Committee recommended that open-ended informal consultations be held among interested member States in the margins of the sessions of the Committee and its Subcommittees in 2011, with a view to proposing further measures to rationalize and optimize the work of the Committee and its subsidiary bodies.

319. The Committee agreed to continue reviewing its organizational matters at its fifty-fourth session, in 2011.

320. The Committee requested the Secretariat to present to the Legal Subcommittee at its fiftieth session and the Committee at its fifty-fourth session, for their consideration, a detailed proposal to discontinue the use of unedited transcripts. The use of digital recordings should be assessed.

321. The Committee noted the following proposals for optimizing and rationalizing its work and that of the Subcommittees:

(a) Clustering of agenda items;

(b) Having open only one item at a time;

(c) Making better use of existing tools, such as the daily *Journal* and the indicative schedule of work;

(d) Uploading statements on the website of the Office for Outer Space Affairs in a timely manner and the introduction of webcasts;

(e) Limiting the number of interventions by delegations under each agenda item;

(f) Limiting the length of presentations of information on national activities and projects in statements;

(g) Beginning meetings promptly as scheduled;

(h) Reducing the length and quantity of technical presentations, and the establishment of selection criteria.

322. The Committee considered, upon the request of the States members of the Group of Latin American and Caribbean States, the possibility of introducing new procedural terminology in reports of the Committee and its subsidiary bodies when reflecting views of that regional group.

323. Some delegations were of the view that the reference to names of regional groups in connection with the summaries of views in reports of the Committee and its subsidiary bodies would support the principle of multilateralism and extend a similar practice adopted in other committees of the General Assembly and organizations of the United Nations system.

324. Some delegations were of the view that the present procedural terminology remained relevant and that it reflected clearly the spirit of consensus in the decision-making of the Committee and its subsidiary bodies. Those delegations were of the view that references to names of regional groups in connection with the summaries of views in reports could upset the balance in them by creating the impression that views expressed by a group prevailed over views expressed by individual States.

325. The Committee agreed to include the names of regional groups in the paragraphs listing the speakers under each agenda item in the reports of the Committee and its subsidiary bodies.

6. Commemoration of the fiftieth anniversary of the first session of the Committee and the fiftieth anniversary of human space flight

326. The Committee recalled its agreement at its fifty-second session, in 2009, to celebrate at its fifty-fourth session, scheduled to be held from 1 to 10 June 2011, the fiftieth anniversary of the first session of the Committee and the fiftieth anniversary of the first human space flight.

327. The Committee noted with appreciation that the Office for Outer Space Affairs had begun to make arrangements for special events and activities to be held

throughout 2011 in celebration of those milestones and that, together with the Chair of the Committee, it had conducted informal consultations with interested member States regarding the events to take place at the fifty-fourth session of the Committee.

328. The Committee noted with appreciation the proposal by the Chair regarding the fiftieth anniversary of the Committee and the fiftieth anniversary of human space flight, contained in conference room paper A/AC.105/2010/CRP.13.

329. The Committee agreed that the first day of its fifty-fourth session should be dedicated to the commemoration of the two anniversaries to enable representation at the highest level.

330. The Committee agreed that the commemorative events on 1 June 2011 would include a high-level segment, open to all Member States of the United Nations. Those events would have the participation of representatives at the ministerial level, heads of agencies, astronauts and other dignitaries and would address the achievements of the Committee over the course of 50 years, the 50 years of human space flight and the future of humanity in outer space.

331. The Committee encouraged Member States to draw the attention of their ministers, heads of agencies and other dignitaries to the commemorative events with a view to securing their participation.

332. The Committee agreed that a joint statement or similar communiqué should be prepared to raise awareness of how international cooperation is accelerating progress in space science and technology and their application for achieving sustainable development. The Committee agreed that the first draft of the statement should be circulated before the forty-eighth session of the Scientific and Technical Subcommittee.

333. The Committee agreed that as from Thursday, 2 June 2011, the work of its session would follow the usual pattern.

334. The Committee agreed that an informal consultative group, composed of representatives of the permanent missions of interested States, would be set up to support the Chair in the preparations for the events and that interested representatives of the permanent missions should be invited to provide their names to the Office for Outer Space Affairs.

335. The Committee noted with satisfaction the preparations undertaken by the Office for Outer Space Affairs in consultation with interested member States to organize a special exhibition to commemorate the two anniversaries.

7. Future role and activities of the Committee

336. The Committee continued its consideration of the topic "Future role and activities of the Committee", in accordance with the agreement reached at its fifty-second session.

337. The Committee noted with appreciation the working paper by the Chair of the Committee for the period 2008-2009 entitled "Towards a United Nations space policy" (A/AC.105/L.278) and agreed to include a new item entitled "Future role of the Committee" on the agenda for its fifty-fourth session, for one year only, to enable the Committee to consider that paper further.

8. Panel discussion during the sixty-fifth session of the General Assembly

338. The Committee agreed that the panel discussion to be held in the Fourth Committee of the General Assembly during its sixty-fifth session, when it considers the item "International cooperation in the peaceful uses of outer space", should be on the subject "Space and emergencies".

9. Draft provisional agenda for the fifty-fourth session of the Committee

339. The Committee recommended that the following substantive items be considered at its fifty-fourth session, in 2011:

1. General exchange of views.
2. Ways and means of maintaining outer space for peaceful purposes.
3. Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III).
4. Report of the Scientific and Technical Subcommittee on its forty-eighth session.
5. Report of the Legal Subcommittee on its fiftieth session.
6. Spin-off benefits of space technology: review of current status.
7. Space and society.
8. Space and water.
9. Space and climate change.
10. Use of space technology in the United Nations system.
11. Future role of the Committee.
12. Other matters.

L. Schedule of work of the Committee and its subsidiary bodies

340. The Committee agreed on the following tentative timetable for its session and those of its subcommittees in 2011:

	Date	*Location*
Scientific and Technical Subcommittee	7-18 February 2011	Vienna
Legal Subcommittee	28 March-8 April 2011	Vienna
Committee on the Peaceful Uses of Outer Space	1-10 June 2011	Vienna